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Product Information

LysoTrack™ Green

Catalog Number	Concentration	Unit Size
C060	1 mM	1 mL

Storage upon receipt:

- -20°C
- Protect from light

Product Description

LysoTrack™ Green is a cell-permeable, non-fixable, green-fluorescent dye that selectively stains lysosomes in live cells. This dye has an excitation and emission maximum of 504/511 nm and can be efficiently excited using a FITC filter. This probe is provided as 1 mM solution in DMSO.

The LysoTrack probes are fluorescent acidotropic probes for labeling and tracking acidic organelles in live cells. These probes have high selectivity for acidic organelles and effective labeling of live cells at nanomolar concentrations.

The LysoTrack probes, which consist of a fluorophore linked to a weak base that is only partially protonated at neutral pH, are freely permeant to cell membranes and typically concentrate in spherical organelles. Their mechanism of retention has not been firmly established but is likely to involve protonation and retention in the membranes of the organelles, although staining is generally not reversed by subsequent treatment of the cells with weakly basic cell-permeant compounds.

Table 1. Spectral characteristics of LysoTrack™ Green

Product Name	E_x (nm)	E_m (nm)
LysoTrack™ Green	504	511

Guidelines for Use

Before opening, allow the vial to warm to room temperature and then briefly centrifuge the vial in a microcentrifuge to deposit the DMSO solution at the bottom of the vial.

The concentration of probe for optimal staining will vary depending on the application. Here we suggest some initial conditions to use as a guideline. The staining conditions may need to be modified depending upon the particular cell type and the permeability of the cells or tissues to the probe, among other factors.

1. Dilute the 1 mM probe stock solution to the final working concentration in the growth medium or buffer of choice. We recommend working concentrations of 50-75 nM. To reduce potential artifacts from overloading, the concentration of dye should be kept as low as possible.

Note: If the cells are incubated in dye-free medium after staining, we often observe a decrease in fluorescent signal and cell blebbing.

2. For adherent cells, grow cells on coverslips inside a Petri dish filled with the appropriate culture medium. When cells have reached the desired confluence, remove the medium from the dish and add the prewarmed (37°C) probe-containing medium. Incubate the cells for 30 minutes to 2 hours under growth conditions appropriate for the particular cell type. Then replace the loading solution with fresh medium and observe the cells using a fluorescence microscope fitted with the correct filter set. If the cells do not appear to be sufficiently stained, we recommend either increasing the labeling concentration or increasing the time allowed for the dye to accumulate in the lysosomes.

3. For suspension cells, centrifuge to obtain a cell pellet and aspirate the supernatant. Resuspend the cells gently in prewarmed (37°C) probe-containing medium. Incubate the cells for 30 minutes to 2 hours under growth conditions appropriate for the particular cell type. Re-pellet the cells by centrifugation and resuspend in fresh prewarmed medium. Observe the cells using a fluorescence microscope fitted with the correct filter set. If the cells do not appear to be sufficiently stained, we recommend either increasing the labeling concentration or increasing the time allowed for the dye to accumulate in the lysosomes.

Alternatively, suspension cells may be attached to coverslips that have been treated with BD Cell-Tak (BD Biosciences) and stained as if they were adherent cells (see step 2).